

INSTRUCTION MANUAL



INSTRUCTION MANUAL ECO CDS / ECO PRO CDS ECO PRO CDS RACK 2U



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INTRODUCTION

Thank you for purchasing the EVER ECO CDS / ECO Pro CDS digital UPS (UPS). It is a state-of-the-art series of UPSs with enhanced security index equipped with the **Clear Digital Sinus (CDS)** system that generates true sine wave voltage at the battery output. This series of UPSs was designed for users who are exposed to the specific power supply conditions prevalent in the Polish power grid. The UPS was manufactured in Poland and its structure conforms with requirements of the **CE** symbol criteria.

GENERAL INFORMATION

PURPOSE OF THE POWER SUPPLY

UPSs of this series protect the devices connected to it from mains power losses, voltage drops and eliminate the danger of damages caused by overvoltage in the mains.

Their main purpose is to protect computers, computer peripherals and fiscal devices. They can also be used to power telecommunications equipment (exchanges, facsimiles) and alarm systems. If you would like to use the UPS to power other, specific receivers, please contact the technical support first.

Unlike **ECO CDS** models, **ECO Pro CDS** UPSs are equipped with a communication module.



WARNING! EVER ECO CDS / ECO Pro CDS UPSs were not designed to work with medical equipment, in particular life and/or health support devices.

GENERAL FEATURES OF THE UPSS

- **CLEAR DIGITAL SINUS (CDS)** system;
- synchronisation with the mains;
- **"Cold start"** – option of starting the UPS without connection to the mains;
- Acoustic signalling of low battery level;
- smart battery charging circuit – **CBC (Cool Battery Charging)** – which extends their life;
- microchip control of all operating parameters;
- resistance to overloads;
- protection against shorting;
- RJ telecommunications filter;
- ergonomic power switch;
- system of passive mains filters;
- PowerSoft software (Pro and Rack versions)
- Communication port for connection with a PC

ELEMENTS OF THE UPS - Tower Model

FRONT PANEL

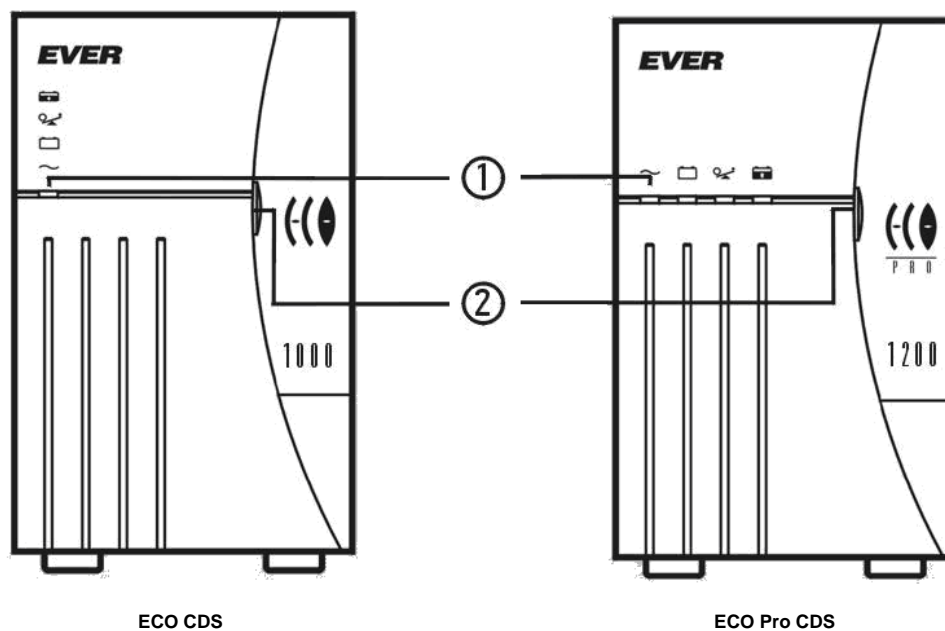


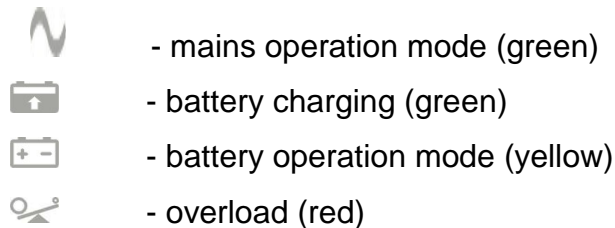
Fig. 1: ECO CDS, ECO Pro CDS, Tower models, front panel

FRONT PANEL OF THE ECO CDS VERSION

- 1) Green signalling LED – displays individual operating modes of the UPS indicated by the ideograms:
 - a) Constant light of the green LED indicates **mains operation mode**.
 - b) Green LED pulsating every 2.5 sec. indicates **battery charging**.
 - c) Pulsating green LED and an intermittent sound signal indicate **battery operation mode**; when the sound signal becomes continuous it means that the UPS will switch off in 30 seconds.
 - d) Quick pulsating of the green LED accompanied by an intermittent sound signal indicate and **overload** or a **shorting**.
- 2) Power switch – when there is no mains voltage or when the UPS is not connected to the mains socket, the switch starts the UPS in the battery operating mode – see also "cold start".

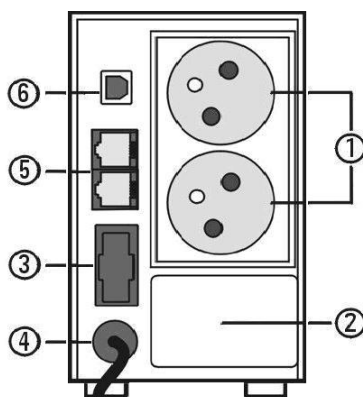
FRONT PANEL OF THE ECO Pro CDS VERSION

- 1) Four green signalling LED – display individual operating modes of the UPS indicated by the ideograms:



- 2) Power switch – when there is no mains voltage or when the UPS is not connected to the mains socket, the switch starts the UPS in the battery operating mode – see also "cold start".

REAR PANEL



- 1) Outlet sockets
- 2) Rating plate.
- 3) Fuse holder.
- 4) Power cord.
- 5) Telecommunications filter sockets
- 6) USB communication socket (only ECO Pro CDS)

Fig. 2: ECO Pro CDS - rear panel

ELEMENTS OF THE UPS - Rack Model

FRONT PANEL

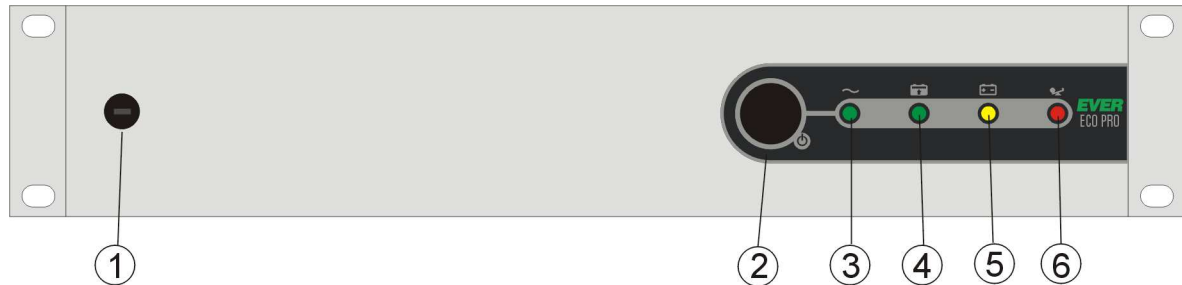


Fig. 3: ECO Pro CDS Rack 19" 2U – front panel

- 1) Circuit breaker
- 2) Power switch – when there is no mains voltage or when the UPS is not connected to the mains socket, the switch starts the UPS in the battery operating mode – see also "cold start".
- 3) Signalling LED – mains operation mode (green)
- 4) Signalling LED – battery charging (green)
- 5) Signalling LED – battery operation mode (yellow)
- 6) Signalling LED – overload (red)

REAR PANEL

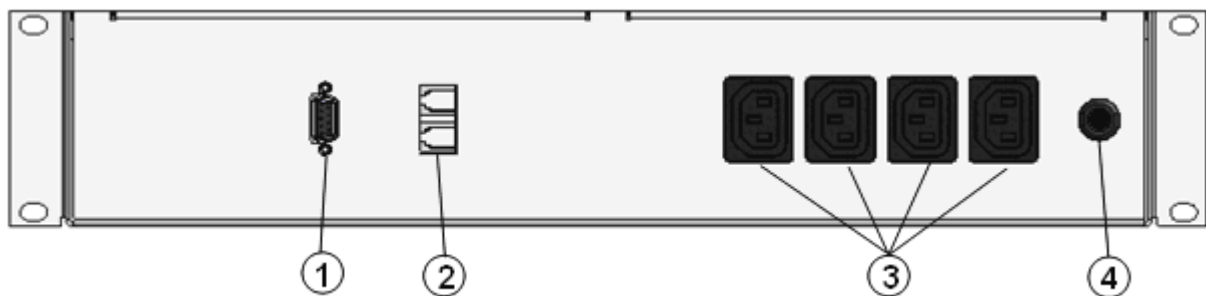


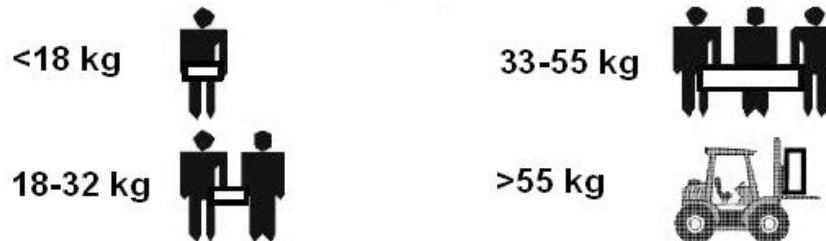
Fig. 4: ECO Pro CDS Rack 19" 2U – rear panel

- 1) Communication port DB9 RS232
- 2) Telephone filter sockets
- 3) Outlet sockets
- 4) Power cord

HEALTH AND SAFETY INSTRUCTIONS

HANDLING

- exercise utmost caution when handling the device;
- do not handle heavy equipment by yourself;



- storage and operation of the device should take place in conditions conforming to its specification.

ELECTRIC SAFETY

- Storage and operation of the device should take place in conditions conforming to its specification.
- Even a momentary shorting of a strong current may lead to severe burns;
- Prior to connecting the device to the mains inspect the condition of power leads, plugs and sockets, as well as the condition of the device itself;
- The device must be plugged in to a three-lead socket (two poles and earthing) – connecting the device to any other socket may result in electric shock.
- A device powered via a cord with a plug has an earthing lead that carries away the leakage current from the receivers (e.g. computer equipment) – the total leakage current must not exceed 3.5mA.
- Never work alone in conditions that may be hazardous to health and/or life;
- To minimise the risk of electric shock, in cases when there is no way of verifying the earthing, the device should be disconnected from the mains before installation or connection of other equipment to the battery module – reconnect the power lead only after all connections are made;
- To avoid the risk of electric shock when connecting and disconnecting communication cables and touching two surfaces with differing electric potential, if possible use only one hand;

- the device receiving the current must be connected with an appropriate circuit protection (manual circuit breaker or circuit breaker);
- Users are forbidden to carry out any maintenance activities, as they may lead to injury or death. Any repairs and replacement of batteries should be conducted only by qualified technical support staff.



WARNING! The UPS is disconnected from the mains only when the power cord is removed from its socket.



WARNING! Since the device is equipped with internal power source (batteries) the output may provide hazardous voltage even though the device itself is not connected to the mains.



WARNING! EVER ECO CDS / ECO Pro CDS UPSs were not designed to work with medical equipment, in particular life and/or health support devices.

INSTALLATION



WARNING! Prior to the installation of the UPS it is crucial to familiarise yourself with the health & safety measures provided in the previous chapter.

UNPACKING

Please inspect the UPS upon receipt. Although the product is packed very carefully it could have sustained damage from shock during transport. Should you find any damages, please inform the carrier or seller immediately.



WARNING! The device is delivered with its accumulator connected.

Check the contents of the packaging. The packaging should contain:

- the UPS,
- a CD-ROM with the PowerSoft software and complete instruction manual,
- quick reference guide,
- USB or RS232 communication cable (depending on the battery module model) to connect the battery module to a computer,
- spare fuse,
- warranty card.

INSTALLATION OF THE UPS – Tower Model

Tower model UPSs do not require additional cabinets or racks. When choosing the installation location you must take the device's weight into account. The battery module should only be used in rooms whose dustiness, temperature and moisture levels conform with the device's specification. To ensure correct operation of the battery module, appropriate cooling conditions for the device must be provided. For this reason the ventilation openings on the battery module's case must be uncovered and the distance between the battery module and other objects should be at least 15 cm.

The mains socket the UPS is to be connected to should be located near the battery module (maximum distance – 1,5 m) and should be easily accessible. Do not use additional extension cords to connect the device to the mains.



WARNING! The device must not be installed in the proximity of flammable materials!

INSTALLATION OF THE UPS – Rack Model

Due to the large weight of EVER **ECO Pro CDS Rack** UPSs, the user should pay special attention to the strength of the cabinet/rack. The battery module should only be used in rooms whose dustiness, temperature and moisture levels conform with the device's specification. To ensure correct operation of the battery module, appropriate cooling conditions for the device must be provided. For this reason the ventilation openings on the battery module's case must be uncovered.

The battery module is designed for installation in a cabinet/rack.

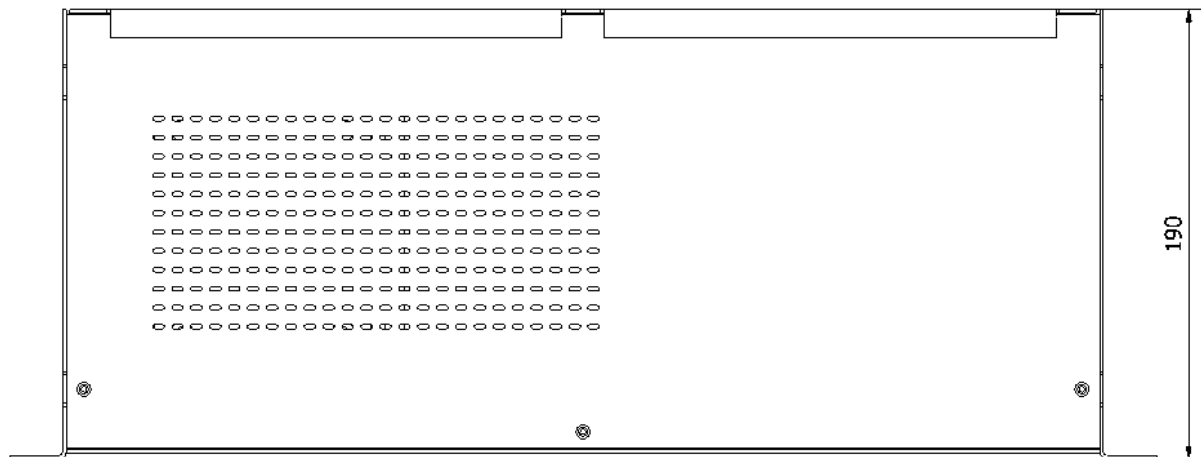


Fig. 5: Top view of the UPS



WARNING! The device must not be installed in the proximity of flammable materials!

The mains socket the UPS is to be connected to should be located near the battery module (maximum distance – 1,5 m) and should be easily accessible.

Do not use additional extension cords to connect the device to the mains.



WARNING! The UPS is disconnected from the mains only when the power cord is removed from its socket.

Due to the type and location of circuit breakers present in the UPS the safety circuits of the building function as one of the protection measures. **This is essential to provide the UPS with shorting protection.** Protection parameters of the buildings' installations should be adjusted according to the type and size of load connected to the installation. Differing parameters of protections of installations in the building and the UPS may in extreme cases lead to quicker responses of the former.

FIRST START



WARNING! The UPS may only be connected to a ~230V mains socket equipped with a grounding bolt. Electric installation of the building to which the battery module is connected must be protected against overloads and shorting.

WARNING! After unpacking, the device should be installed in the chosen location and connected to the mains. Next, the UPS should be turned on with the power switch on the front panel in order to charge the internal accumulators. It takes approximately 8-10 hours to charge the accumulators fully – the battery charging LED should go out. Afterwards, the user may continue with the installation procedure.



WARNING! Back-up's batteries reach their full capacity after approximately a month of mains operating mode.

STARTING THE UPS

1. Connect the UPSs power cord to the mains socket featuring an earthing bolt.
2. Connect the equipment you want protected to the outlet sockets on the UPS.
3. Turn on the UPS by pressing (or switching in the case of Rack models) the power switch on the front panel. A fully operational UPS connected to mains of correct parameters will signal that it was switched on with three short sound signals and three blinks of all signalling LEDs. Next, switch on the protected devices.
4. Remove the UPSs power cord plug from the mains socket – the UPS should switch to battery operation mode and the protected device should work as usual. The UPS will indicate this operation mode by lighting the yellow LED and emitting an intermittent sound signal. If after removing the plug the red LED lights up as well, it means that too high a load was connected to the UPS (in this condition the UPS will operate for 5 seconds and then switch off automatically). You should then disconnect the surplus load. If the load is in the nominal range, the red LED should go out.
5. Replace the power cord plug in the mains socket – after approx. 3 seconds the battery operation mode LED (yellow) will go out and the mains operation mode LED (green) will light up. After returning to the mains operation mode the UPSs accumulators may require recharging. The charging process will be indicated by the appropriate LED (green).

Please remember that when the UPS is providing power from its internal battery and the yellow LED is pulsating, the change of the acoustic signalling to a constant sound indicates that the device will switch off in 30 seconds.

STARTING THE UPS WITHOUT CONNECTION TO THE MAINS – COLD START

Without appropriate mains voltage available the UPS can be started in the battery operation mode and power the devices until the voltage returns or until the batteries are discharged.

In order to start the UPS in this manner connect the appropriate devices to the UPS and turn it on with the power switch on the front panel. The UPS will indicate its readiness with three short sound signals and switch to battery operation mode. ECO CDS models signal this by a pulsating green LED on the front panel and an intermittent sound signal. ECO Pro CDS models light up the yellow LED in addition to the intermittent sound signal. At the same time the devices connected to the UPS are started as well.



WARNING! Due to different current consumption of different colour monitors, there may be problems turning them on. If the set does not start after the first try, you should try again.

DESCRIPTION OF THE BACK-UP'S OPERATION

GENERAL INFORMATION

The EVER **ECO Pro CDS Rack** UPS is a state-of-the-art electronic device constituting an autonomous source of true sine wave voltage of 230V. This device belongs to the VFD group, which includes UPSs that synchronise with the mains impulses. The UPS is equipped with the CLEAR DIGITAL SINUS (CDS) system that generates true sine wave voltage at the battery output. This system increases the reliability of the device and guarantees stable operation of the UPS.

The basic task of a UPS is to supply power to all connected devices from its internal battery in case of mains malfunctions. Battery support time depends on the capacity of accumulators and load currently connected. The UPS was designed to detect extreme operating conditions, i.e. overloads of the converter and outlet shortings. These circuits are active in the battery operation mode.

If the mains voltage has correct parameters, the UPS works in the **mains operation mode**. In such cases the mains voltage is filtered by the disturbance detection unit, where additional radio-electric impulses that impair the quality of the mains current are filtered out before the current appears at the UPSs output. In the event of

exceeding the upper or lower limit of input voltage or lack thereof, the UPS immediately switches to the **battery operation mode**. The charge level of the internal accumulator in battery operation mode is indicated by a sound signal whose frequency increases as the charge level decreases. In the final phase the signal becomes continuous, which indicates that the UPS will switch off soon (at full power it is approx. 30 seconds). When the mains voltage returns, the UPS switches to the **mains operation mode**, initiating the charging process indicated by the green LED. With the batteries fully charged, the green LED goes out. However, in order to ensure constant readiness the UPS keeps topping the batteries up. In order to extend the life of the back-up's accumulators the cyclic charging method was utilised.

This UPS utilises an innovative charging method reserved only for the most advanced UPSs (**CBC - COOL BATTERY CHARGING**) which utilises the elements of an internal inverter. During the mains operation mode it charges the accumulators and in the battery module operation mode it converts the internal energy of the accumulator into the alternating current to power the protected devices.

In the case of EVER **ECO Pro CDS** UPSs connected to a computer with UPS control software installed (e.g. PowerSoft or built-in system functions) via a communication port the condition of system shutdown forced by the software is indicated acoustically (repeated sequence: two sounds – break).

If you would like to start the UPS without connection to the mains, you can do it by switching the UPS on to work in battery mode (see: "Cold start").

SAFEGUARDS

Against overloads:

The UPS signals overloads exceeding 110% of nominal power with a continuous acoustic signal and red LED lighting up. Signalling takes place only in battery operation mode.

Against shorting:

The UPS is equipped with a fuse at the mains input and an electronic circuit breaker at the output. The electronic circuit breaker only works in the battery operation mode. EVER **ECO Pro CDS** UPSs indicate the triggering of the electronic circuit breaker with pulsating red LED and an intermittent sound signal.

COMMUNICATION BETWEEN THE UPS AND THE COMPUTER

EVER **ECO Pro CDS** UPSs are capable of monitoring their operating conditions by status communication. The UPS is delivered with a built-in communication port (RS232 for Rack models) and the PowerSoft software package. Connection of communication cables and installation of the software are covered in the "INSTALLATION AND CONFIGURATION OF THE POWERSOFT SOFTWARE" chapter.

WARNING! The communication connection between the UPS and the computer should be made only if the user intends to use the control software. If the software is not installed while the connection is made then random conditions (PNP or others) may occur, which may lead to incorrect operation of the UPS.

INSTALLATION AND CONFIGURATION OF THE POWERSOFT LITE SOFTWARE

Installation on computers with Windows

Prior to beginning the installation of PowerSoft:

- Uninstall the current version of PowerSoft or any other control software (in situations where the user is changing the UPS protecting the computer),
- If the UPS communicates with the PC via a USB cable, the cable should be initially disconnected from the computer. The software installer will prompt the user to connect the communication cable at the appropriate time.
- If the UPS communicates with the PC via a RS232 port (RACK Model), the communication cable should be connected to the computer before the UPS and the computer are switched on and before PowerSoft is installed. Otherwise the software installer will inform the user on the inability to establish communication and prompt him to connect the communication cable at the appropriate time.

To install PowerSoft on a computer with Windows (the list of operating systems compatible with the application is available at www.ever.eu) just run the software installer and follow the instructions onscreen. During the installation you will be asked to select the model of the UPS connected to the computer on which the software is being installed. This setting may also be changed when the application is running.

In the case of a UPS connected to the computer via a USB cable, when the software installation is complete, the PowerSoft Lite installer will ask the user to connect the USB cable to the computer. The system will announce that a new device has been found and will propose to install the drivers. Select the option to install the drivers from a chosen location and on the next screen indicate the installation folder of the PowerSoft software (usually *C:\Program Files\PowerSoft*) to be searched. Next, the operating system will locate and install the appropriate driver.

In the case of Windows Vista the operating system will not initiate automatic installation of the drivers from the hard drive. After connecting the USB cable to the computer you will need to open the control panel from the Start Menu and select system properties. On the device tree displayed find the USB bus branch (in most cases it will be already expanded) and select the UPS. Update the device's driver from it's "Properties" window by right-clicking it in the list and following the instructions onscreen. As the driver's location you should indicate the PowerSoft installation folder (usually *C:\Program Files\PowerSoft*).

To uninstall PowerSoft select the "Uninstall PowerSoft" option in Start Menu. You can also uninstall PowerSoft from the "Add and remove programs" menu in the control panel.

Installation on computers with Linux/Unix

The binary version of the application for Linux/Unix systems is provided in the following formats:

CentOS, RedHat, Suse Linux, Fedora Core

For CentOS, RedHat, Suse Linux, and Fedora Core systems the software is provided in the form of a RPM package. The software can be installed by using any package manage available for the system installed. If you are using the command line, the software is installed by entering the following command:

```
rpm -ivh powersoftlite-x.x.x.i386.rpm
```

Users working with the PowerSoft must have root privileges to install the software and use it. After installation the application may be found in the */usr/local/powersoft* directory.

To uninstall the application enter the following command:

```
rpm -ev powersoftlite-x.x.x
```

Debian

For Debian systems the software is provided in the form of a DEB package. The software is installed via the following command:

```
dpkg --install powersoftlite-x.x.x.deb
```

To uninstall the application enter the following command:

```
dpkg --remove powersoft
```

FreeBSD

For FreeBSD systems the software is provided in the form of the default package format designed for FreeBSD systems. The software is installed via the following command:

```
pkg_add powersoftlite-x.x.x.tbz
```

To uninstall the application enter the following command:

```
pkg_delete powersoft
```



WARNING! FreeBSD systems do not support communication with the UPS via the USB cable.

Starting the software

When the installation is complete, the system service is started automatically, while the control panel application can be found at */usr/local/powersoft*.

Please note that for the Polish diacritics to be correctly displayed the system locale should be Polish.

ADDITIONAL REMARKS



CAUTION! EVER ECO CDS / ECO Pro CDS UPSs belong to the C2 category. In domestic environment the product may interfere with reception of radio waves so the user may be required to implement additional preventive measures.



WARNING! No service elements located inside the UPS are to be modified by the end user.

- Damaging the warranty seal shall void the warranty for the given device.
- Any repairs should be conducted only by qualified technical support staff.
- The UPS may not perform as expected if the powered equipment draws high impulse power. In practice, this means that even though mean power of the protected equipment does not exceed the power range accepted by the UPS, the equipment will cause the UPS to shut down. This happens because the protected equipment temporarily draws power that significantly exceeds the nominal power of the UPS, which causes an overload detection and consequently a shutdown. This situation may occur in the case of:
 - Television sets and monitors (as they are switched on the picture tube is degaussed which temporarily requires a lot of power),
 - Laser printers (drum warming cycle),
 - Other products with similar operating features.

If the UPS is to be used with equipment other than computers, its compatibility with equipment used must be verified. In order to do this, all devices should be connected to the UPS and its operation should be observed in all modes, i.e. start-up, shutdown, stand-by, etc.

FUSE REPLACEMENT

If the power consumption of a device connected to the UPS exceeds its nominal power or if a shorting in a mains socket takes place, it may cause the fuse to burn (the fuse is located in a special holder). In order to replace the fuse, turn the UPS off with the power switch, remove the power cord from the socket, remove the fuse

holder and replace the fuse with a spare one that conforms to the battery module's specification. A spare fuse is provided with the UPS.

UPS AND POWER GENERATORS

EVER **ECO CDS / ECO Pro CDS** UPSs are VFD class devices synchronising with the mains voltage. By design, the UPS tolerates mains voltage variations in the range of ~184-264V, as well as frequency variations of $\pm 5\text{Hz}$ with relation to the nominal frequency of 50Hz. When connected to a power generator, the frequency variations change over time and are strictly dependent on changes in load levels. If the frequency variations of a power generator's voltage exceed the allowed tolerance range, the UPS will consider such frequency to be incorrect and switch to battery operation mode.

USING THE TELECOMMUNICATION FILTER

In order to protect the telephone line and connected devices such as modems or telephones, the EVER **ECO Pro CDS** UPSs are equipped with an anti-overvoltage filter which safeguards the devices connected against overvoltages in the telephone line. If the filter is to safeguard the devices correctly they must be connected with a cable with RJ11 or RJ12 terminators. The existing telephone line should be connected to the other outlet socket of the filter. The filter is symmetrical, so it does not matter to which of the two sockets the telephone line is connected.

STORAGE, MAINTENANCE AND TRANSPORT

The UPS should be stored in a cool and dry place, in operating position, with accumulators fully charged:

- In temperatures between 0°C and +30°C the accumulator should be charged every 6 months;
- In temperatures between +30°C and +45°C the accumulator should be charged every 3 months.


The UPS should be transported in the original packaging and in conditions conforming to the product's specification (see "Technical parameters"). If the packaging is missing or a non-original or incomplete packaging is used, EVER Sp. z o.o. shall not be liable for any mechanical damages that occur in transport.

DISPOSAL

Appropriate disposal of used-up electric and electronic equipment helps to avoid consequences resulting from the presence of dangerous materials, as well as inappropriate disposal and processing of such equipment, which may be hazardous to human life and the environment.

Act dated 29 July 2005 on used-up electric and electronic equipment, Article 22.1 items 1 and 2.



According to the applicable EU regulations, a crossed rubbish bin symbol means that when a product is no longer used it should be disposed of at a special waste pickup site. This concerns the device itself, as well as other accessories marked with this  symbol. Do not dispose of those products together with unsorted household waste.

Method of safe removal of the batteries from the appliance:

The batteries should be removed from the appliance by an authorised service outlet or by a duly authorised electrician.

TECHNICAL PARAMETERS OF ECO / ECO PRO – Tower Model

PARAMETERS \ UPS TYPE	ECO CDS / ECO Pro CDS			
	500	700	1000	1200
Output power	500VA / 300W	700VA / 420W	1000VA / 650W	1200VA / 780W
Working environment	Office or industrial rooms with low level of pollution			
Operating temperature	+10 ÷ +35 °C			
Storage temperature	0 ÷ +45°C			
Relative humidity for operation	20 ÷ 80 % (without condensation)			
Relative humidity for storage	20 ÷ 95 % (without condensation)			
Altitude (above sea level)	up to 1000 m			
Maximum length of outlet cables	< 10 m			
MAINS OPERATION MODE				
Input voltage	~184 ÷ 264 V ± 2 %			
Frequency of input voltage	45 ÷ 55 Hz ± 1 Hz			
Range of output voltage	~184 ÷ 264 V ± 2 %			
Switching thresholds: Mains-ups	~184 / 264 V ± 2 %			
Shape of output voltage	Sinus			
Filtering of output voltage	Noise filter RFI/EMI varistor damper			
Time to switch to battery operation mode	<3ms			
BATTERY OPERATION MODE				
Output voltage (effective value)	~230 V ±5 %			
Shape of output voltage	Sinus			
Switching thresholds: Ups-mains	~189 V / ~259 V ± 2 %			
Frequency of output voltage	50 Hz ±1Hz			
Filtering of output voltage	LC			
Shorting safeguard	Electronic			
Overload protection	Electronic			
Time to switch back to mains operation	0 ms			
Support time 100%/80%/50% P _{max}	3.5 / 5 / 9.5 min	4.5 / 6 / 12 min	3.5 / 5 / 9 min	3 / 4 / 7 min
Accumulator	1 x 12V / 5 Ah	1 x 12V / 7 Ah	2 x 12V / 5 Ah	2 x 12V / 5 Ah
Maximum charging time	5 h	7 h	5 h	5 h
MECHANICAL PARAMETERS				
Dimensions (h x w x d)	150x90x350 mm		147x90x434 mm	
Weight	6,3 kg	7,2 kg	10 kg	10 kg
EQUIPMENT				
Number of outlet sockets	2			
Signalling	ECO CDS – acoustic and visual (1 LED) ECO Pro CDS – acoustic and visual (4 LEDs)			
Circuit breaker	Glass 5 x 20mm 5A time delay circuit breaker		Glass 5 x 20mm 8A	
Telecommunication filter	Available			
Communication interface	ECO CDS - none; ECO Pro CDS - USB, status communication			

TECHNICAL PARAMETERS – Rack Model

PARAMETERS / UPS TYPE	ECO Pro 700 CDS	ECO Pro 1000 CDS	ECO Pro 1200 CDS
Output power ¹⁾	700VA / 420W	1000VA / 650W	1200VA / 780W
Working environment	Office or industrial rooms with low level of pollution		
Operating temperature ²⁾	+10 ÷ +35 °C		
Storage temperature	0 ÷ +45°C		
Relative humidity for operation	20 ÷ 80% (without condensation)		
Relative humidity for storage	20 ÷ 95% (without condensation)		
Altitude (above sea level) ³⁾	up to 1000 m		
Maximum length of outgoing cables	< 10 m		
MAINS OPERATION MODE			
Input voltage	~184 ÷ 264V ± 2%		
Frequency of input voltage	45 ÷ 55Hz ± 1Hz		
Range of output voltage	~184 ÷ 264V ± 2%		
Switching thresholds: Mains – UPS	~184V / ~264V ± 2%		
Shape of output voltage	Sinus		
Filtering of output voltage	Noise filter RFI/EMI varistor damper		
Time to switch to UPS	<3 ms		
BATTERY MODULE (BATTERY) OPERATION MODE			
Output voltage (effective value)	~230V ±5 %		
Shape of output voltage	Sinus		
Switching thresholds: UPS – mains	~189V / ~259V ± 2%		
Frequency of output voltage	50 Hz ± 1Hz		
Filtering of output voltage	LC		
Shorting safeguard	Electronic		
Overload protection	Electronic		
Time to switch back to mains operation	0 ms		
Support time 100%/80%/50%P _{max}	4.5 / 6 / 12 min	3.5 / 5 / 9 min	3 / 4 / 7 min
Accumulator	1 x 12 V / 7Ah	2 x 12 V / 5Ah	2 x 12 V / 5Ah
Maximum charging time	7 h	5 h	5 h
MECHANICAL PARAMETERS			
Dimensions (h x w x d)	2U x 19" x 195 mm		
Weight	13 kg		
EQUIPMENT			
Number of outlet sockets	4 x IEC 320 C13		
Signalling	acoustic and visual (4 LEDs)		
Circuit breaker	Glass 5x20mm 5A time delay circuit breaker	Glass 5x20mm 8A time delay circuit breaker	
Telecommunication filter	Available		
Communication interface	RS232, status communication		

Note: The manufacturer reserves the right to change the abovementioned parameters without prior notice.

Notes:

- ¹⁾ For normal operation of the UPS the load connected to its output should not exceed 80% of value indicated in the table. Reserve power is essential to ensure continuous operation of connected devices in case of momentary rushes in load current.
- ²⁾ Continued exposure of the UPS to the temperature of the surrounding exceeding +25°C will shorten the life of batteries. If the altitude above sea level increases beyond the provided limit the permitted load power of the battery module decreases.

INFORMATION REGARDING REGULATIONS AND WARRANTY

DECLARATION OF CONFORMITY

The UPS was manufactured in Poland and its structure conforms to appropriate subject matter standards.

WARRANTY

A separate document attached to the product constitutes the warranty. The document must meet all formal requirements (e.g. the following fields must be populated: serial number, model/type, date of sale, and dealer stamp).

The manufacturer made all efforts to ensure that products offered are free of material and workmanship defects throughout the term specified in the warranty document. The company's liability under the warranty shall be limited to repairs or replacement of products with such defects. The manufacturer shall make the decision as to how the defect is removed. The warranty shall not cover devices with mechanical damages that occurred as a result of negligence or incorrect use nor devices subjected to any modifications made by the user.

Apart from the arrangements included in the warranty card EVER Sp. z o.o. shall not grant any guarantee or warranty, including warranty of merchantability or fitness for particular purpose.

Apart from the arrangements included in the warranty card EVER Sp. z o.o. shall not be liable for direct, indirect, specific, incidental or consequential losses incurred in the course of using the UPS, even in cases when the buyer was warned about such losses being a possibility. The company shall not be liable for any costs, such as loss of profit or revenue, cost of equipment, costs of equipment use, costs of software, data, replacement products, claims of third parties or other costs.